9145A

Guildline INSTRUMENTS LTD.

SMITHS FALLS, ONTARIO

Guildline Instruments Limited,
Smiths Falls, Ontario, Canada.

LOW THERMAL

SELECTOR SWITCH

TYPE 9145A

OPERATING INSTRUCTIONS

The Type 9145A Selector Switch is based on a design by Dr. T.M. Dauphinee of National Research Council, Ottawa, and is intended for use in potentiometer or other circuits where thermal emfs are important.

Each of the five switch sections are of DPST type in which two pairs of studs with precious metal inserts are connected together by two precious metal rods. The studs are thermally bonded to minimize temperature gradients and electrical connections can be made to them through the terminal screws in the base.

If alternate contact pairs of the switch are connected in parallel to the measuring terminals of a potentiometer the switch can be used to select any one of five external circuits. (Fig. 1)

Any two press button circuits can be cross connected to give a reversing switch action. (Fig. 2)

The buttons lock down when the white dots on the first button are in line across the box and release when any other button is depressed. Two or more buttons may be simultaneously depressed if required. When the first button is turned through 90° so that the dots are in line with the length of the box the buttons are non-locking.

The maximum generation of thermal emfs at the switch contacts is less than 0.01uV.

To obtain the best low thermal operation connections to the screw terminals under

the sliding baseplate should be made in solid copper wire (not tinned copper, nor stranded wire).

At yearly intervals the switch should be removed from the box for cleaning and relubrication. Remove the sliding baseplate and the two screws in the top panel. Carefully wipe the contact surfaces with a clean chamois leather and relubricate with a very small amount of good quality lubricant (eg. Gulfsil Elvo Contact Oil No.1A). A small drop of oil should also be placed on each actuating shaft and on the detent mechanism of the first button.

If it is necessary to dismantle the switch further (for example to change a contact spring) remove the two screws in the base plate which are located beneath the inner edges of the sponge pads. The complete push button assembly can then be removed from the baseplate.

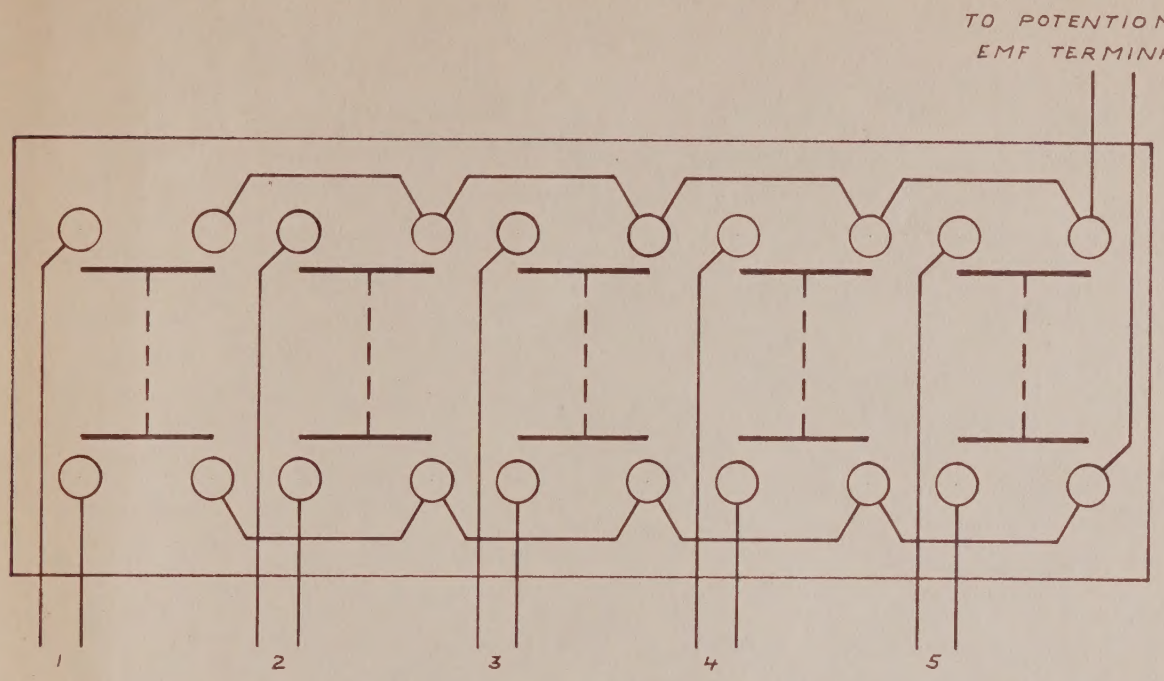

FIG. 1 FIVE CIRCUIT SELECTOR

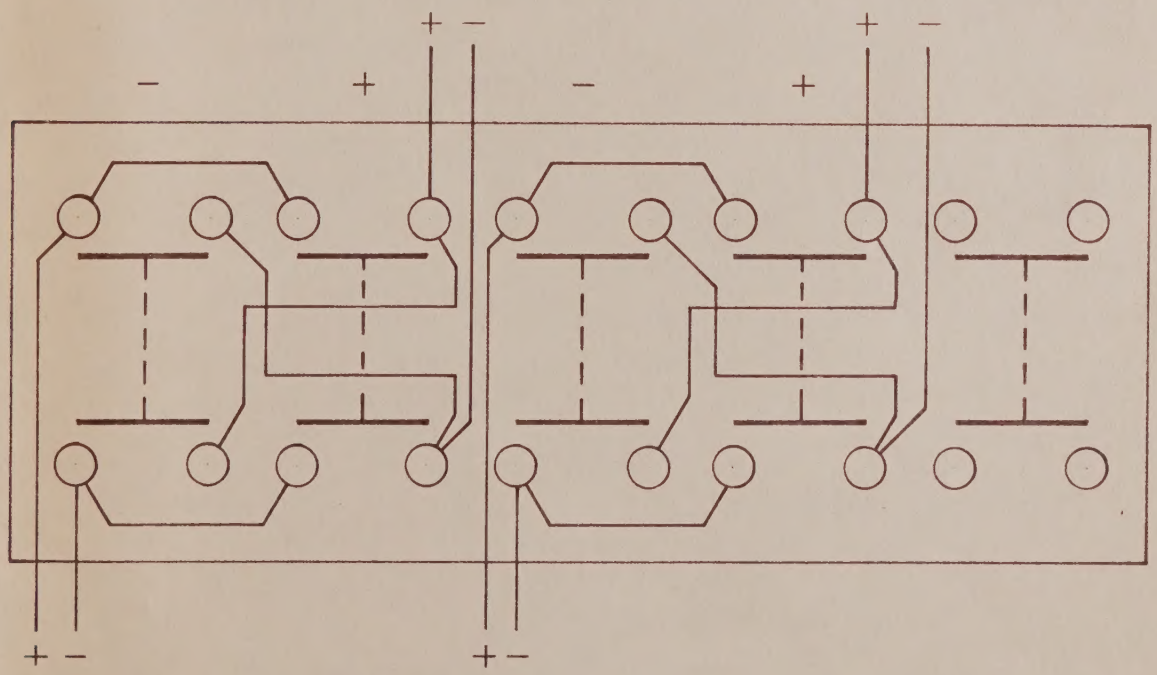

FIG. 2 TWO REVERSING SWITCHES

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